



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,084	09/12/2003	Brian D. Petry	ASTU-007/01US 017622-2016	6604
23419 7590 07/16/2008 COOLEY GODWARD KRONISH LLP ATTN: Patent Group Suite 1100 777 - 6th Street, NW Washington, DC 20001			EXAMINER WANG, LIANG CHE A	
			ART UNIT 2153	PAPER NUMBER
			MAIL DATE 07/16/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/661,084	<b>Applicant(s)</b> PETRY ET AL.	
	<b>Examiner</b> Liangche A. Wang	<b>Art Unit</b> 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 21-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 35-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>multiple</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-20, 35-38 are presented for examination.
2. Claims 21-34 are withdrawn.

### ***Paper Submitted***

3. It is hereby acknowledged that the following papers have been received and placed of record in the file:
  - a. **Information Disclosure Statements** as received on 9/22/07, 5/27/07, 5/09/07 are considered.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title

5. Claims 35-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to software per se, which does not fall into the categories of “process”, “machine”, “manufacture” and “composition of matter”. Referring to claim 35, claim 35 recites a system that comprises all software components (a protocol stack, and an application), which directs the claim to software per se.

All dependent claims are rejected to as having the same deficiencies as the claims they depend from.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim 9 recites the limitation "wherein the protocol stack postpones freeing of storage..." in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-20, 35-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Eydelman et al., US Publication Number 2002/0007420, hereinafter Eydelman.
11. Referring to claim 1, Eydelman teaches a method of flow control implemented by a system disposed to execute a protocol stack and an application (page 1 [0002]), said method comprising the steps of: configuring the system to operate in a push mode pursuant to which the protocol stack (transport provider) initiates the forwarding, to the application, of a first sequence of data packets received by the protocol stack (large

receiving mode, page 5 [0047]); and configuring the system to operate in a pull mode pursuant to which the application initiates the forwarding, to the application, of a second sequence of data packets received by the protocol stack (discovery mode, page 3 [0027], [0030], page 5 [0047]).

12. Referring to claim 2, Eydelman teaches the method of claim 1 further including transitioning the system from operation in the push mode to operation in the pull mode in response to a first input notification, wherein the push mode and the pull mode constitute mutually exclusive modes of operation (page 3 [0027]).
13. Referring to claim 3, Eydelman teaches the method of claim 1 further including transitioning the system from operation in the pull mode to operation in the push mode in response to a second input notification (page 3 [0027]).
14. Referring to claim 4, Eydelman teaches the method of claim 2 wherein the first input notification includes a receive sequence number corresponding to a sequence number of a data packet which, upon receipt at the protocol stack, induces the transitioning the system from operation in the push mode (page 3 [0027]).
15. Referring to claim 5, Eydelman teaches the method of claim 3 wherein the second input notification includes a receive sequence number corresponding to a sequence number of a data packet which, upon receipt at the protocol stack, induces the transitioning the system from operation in the pull mode (page 3 [0027]).
16. Referring to claim 6, Eydelman teaches the method of claim 1 further including sending, from the protocol stack to the application, receive data indications containing ones of the

first sequence of data packets when the protocol stack is functioning in an always forward mode invoked during operation of the system in the push mode (page 5 [0047]).

17. Referring to claim 7, Eydelman teaches the method of claim 6 wherein the protocol stack assumes that the first sequence of data packets are consumed upon delivery to the application and frees storage corresponding to the first sequence of data packets upon the sending of the receive data indications (page 6 [0056]).
18. Referring to claim 8, Eydelman teaches the method of claim 7 wherein the protocol stack advertises a new window to a peer entity upon freeing of the storage (page 6 [0056]).
19. Referring to claim 9, Eydelman teaches the method of claim 6 wherein the protocol stack postpones freeing of storage corresponding to the first sequence of data packets until confirmation is received from the application that the first sequence of data packets has been consumed by the application (page 6 [0056]).
20. Referring to claim 10, Eydelman teaches the method of claim 1 further including utilizing credit-based flow control during operation of the system in the push mode, the credit-based flow control including configuring the application to provide buffer credits to the protocol stack (page 7 [0064]).
21. Referring to claim 11, Eydelman teaches the method of claim 10 wherein the credit-based flow control permits the protocol stack to forward ones of the data packets within the first sequence to the application provided a sufficient number of the buffer credits remain available (page 7 [0064], [0068-78]).
22. Referring to claim 12, Eydelman teaches the method of claim 1 further including sending, from the protocol stack to the application, data available indications when the protocol

stack is functioning in an always buffer mode invoked during operation of the system in the pull mode wherein the data available indications are generated at the protocol stack in response to receipt of the data packets within the second sequence (page 3 [0027], page 5 [0047]).

23. Referring to claim 13, Eydelman teaches the method of claim 12 further including forwarding the second sequence of data packets from the protocol stack to the application upon receipt at the protocol stack of a read data request generated by the application (page 3 [0027], page 5 [0047]).
24. Referring to claim 14, Eydelman teaches the of claim 12 wherein the data available indications are generated upon receipt of the data packets within the second sequence without intervention of the application (page 3 [0027], page 5 [0047]).
25. Referring to claim 15, Eydelman teaches the method of claim 12 wherein generation of the data available indications is postponed until receipt at the protocol stack of a read data request generated by the application (page 3 [0027], page 5 [0047]).
26. Referring to claim 16, Eydelman teaches the method of claim 1 further including configuring the protocol stack to withhold acknowledgements which would otherwise be sent to an external peer entity upon receipt of the first sequence of data packets from the peer entity (page 3 [0027], page 5 [0047]).
27. Referring to claim 17, Eydelman teaches the method of claim 1 further including configuring the protocol stack to withhold acknowledgements which would otherwise be sent to an external peer entity upon receipt of the second sequence of data packets from the peer entity (page 3 [0027], page 5 [0047]).

28. Referring to claim 18, Eydelman teaches the method of claim 16 or 17 further including:  
sending an acknowledgement prompt indication event from the protocol stack to the application, and sending the acknowledgements from the protocol stack to the external entity upon receipt at the protocol stack of an acknowledgement prompt confirmation from the application (page 3 [0027], page 5 [0047]).
29. Referring to claim 19, Eydelman teaches the method of claim 1 further including sending a window available indication from the protocol stack to the application upon receipt at the protocol of an open receive window indication from an external peer entity (page 3 [0027], page 5 [0047]).
30. Referring to claim 20, Eydelman teaches the method of claim 1 further including sending a room available indication from the protocol stack to the application when sufficient space exists in a send buffer associated with the protocol stack (page 6 [0056]).
31. Referring to claims 35-38, claims 35-38 encompass the same scope of the invention as that of the claims 1-20. Therefore, claims 35-38 are rejected on the same ground as the claims 1-20.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objection made. Applicant must show how the amendments avoid such references and objections. See 37 CFR 1.111(c).



33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is (571)272-3992. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.
34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Liang-che Alex Wang  
July 7, 2008

/Liangche A. Wang/  
Primary Examiner, Art Unit 2153